

REMARKS

In the Office Action, claims 1-17, 21-32, 36-51 and 55 were rejected and claims 18-20, 33-35, and 52-54 were objected to. By the present Response, claims 1, 3, 22, 24, 37, and 39 are amended in view of the Examiner's withdrawal of the indicated allowability of the recited subject matter; claims 7 and 25 are amended to clarify the scope of the recited subject matter; and claims 43 and 44 are amended to correct a clerical error. Upon entry of the amendments, claims 1-55 will remain pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

In the Office Action, the Examiner withdrew the indicated allowability of claims 3, 7, 24, 25, 39, and 42. In view of this withdrawal, the Applicants have restored some of the previously deleted recited matter of claims 1, 22, and 37 since the substance of these claims was not previously discussed by the Applicants. Likewise, the Applicants have deleted recitations from claims 1, 22, and 37 which were added based upon the indication of allowability previously provided by the Examiner.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-4, 7-9, 12-17, 21-32, 36-39, 42-44, 47-51 and 55 under 35 U.S.C. § 103(a) as being obvious in view of U.S. Patent No. 6,535,570 (the "Stergiopoulos reference") in view of U.S. Patent No. 6,002,738 (the "Cabral reference"). In addition, the Examiner rejected claims 1, 3, 4, 22, 24, 25, 27, 37, 39 and 42 under 35 U.S.C. § 103(a) as being obvious in view of U.S. Patent No. 6,252,924 (the "Davantes reference") in view of the Cabral reference. In addition, the Examiner rejected claims 5, 6, 10, 11, 40, 41, 45 and 46 under 35 U.S.C. § 103(a) as being obvious in view of Stergiopoulos in view of Cabral and U.S. Patent No. 4,284,896 (the "Stonestrom reference"). The Applicants respectfully traverse these rejections.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

The Stergiopoulos and Cabral References

With regard to the rejection of independent claim 1 in view of the Stergiopoulos and Cabral references, the Applicants respectfully note that claim 1 recites that projection data is acquired during a *slow* rotation or partial rotation of a gantry. Acquisition of projection data during slow rotations is discussed within the application, such as at page 11, lines 9-25.

Acquisition of projection data during slow rotations appears, however, to be absent from the Stergiopoulos reference. In particular, the passage relied upon by the Examiner as showing this element makes no mention of the rotational speed of the gantry.

Furthermore, the only passage of the Stergiopoulos reference identified by the Applicants which mentions the rotational speed of the gantry indicates that the gantry rotates at 3/4 of a second per rotation, i.e., “T=0.75 second period of rotation”. Stergiopoulos, col. 18, lines 5-7. Applicants believe such rotational speeds are typical of conventionally operated CT gantries and are not *slow* as would be understood by the layperson or by one skilled in the art with the benefit of the present Application. Furthermore, The Cabral reference appears to be silent as to the rotational speed of a gantry used in the disclosed technique.

As neither the Stergiopoulos reference nor the Cabral reference disclose the slow rotation of a gantry, the combination of the references does not disclose all of the recited subject matter of independent claim 1. Therefore, no *prima facie* case of obviousness has been made with regard to independent claim 1 or those claims depending therefrom. Applicants, therefore, respectfully request reconsideration and allowance of claim 1 and those claims depending therefrom. Furthermore, as independent claims 7, 22, 25, 37, and 42 recite similar subject matter, no *prima facie* case of obviousness is believed to exist with regard to these claims as well. Applicants, therefore, respectfully request reconsideration and allowance of claims 7, 22, 25, 37, and 42 and those claims depending therefrom.

The Davantes and Cabral References

The Davantes reference, likewise, appears to be silent with regard to the rotational speed of the gantry during data acquisition. In particular, the passage relied upon by the Examiner as showing this element makes no mention of the rotational speed of the gantry. Furthermore, the only passage of the Davantes reference identified by the Applicants which mentions the rotational speed of the gantry indicates that the gantry rotates at conventional speeds or faster, i.e., “embodiments having gantry 12 rotation speeds *sufficiently fast* to permit reconstruction of views from a full 360° view angle with reduced image artifacts are possible”. Davantes, col. 5, lines 21-24. Emphasis added.

Clearly the Davantes reference contemplates not slower gantry rotations, but faster. In general, however, the Davantes reference does not appear to indicate that data acquisition at other than conventional CT gantry rotation speeds is contemplated. As noted above, the Cabral reference does not cure this deficiency.

As neither the Davantes reference nor the Cabral reference disclose the slow rotation of a gantry, the combination of the references does not disclose all of the recited subject matter of independent claim 1. Therefore, no *prima facie* case of obviousness has been made with regard to independent claim 1 or those claims depending therefrom. Applicants, therefore, respectfully request reconsideration and allowance of claim 1 and those claims depending therefrom. Furthermore, as independent claims 22, 25, 37, and 42 recite similar subject matter, no *prima facie* case of obviousness is believed to exist with regard to these claims as well. Applicants, therefore, respectfully request reconsideration and allowance of claims 22, 25, 37, and 42 and those claims depending therefrom.

The Stergiopoulos, Cabral, and Stonestrom References

With regard to the combination of the Stergiopoulos, Cabral, and Stonestrom references employed by the Examiner in rejecting claims 5, 6, 10, 11, 40, 41, 45, and 46, the Applicants respectfully traverse. In particular, the Applicants respectfully disagree with the Examiner's assertion that one skilled in the art would be motivated to combine the Stergiopoulos, Cabral, and Stonestrom references in the manner suggested. The Applicants note that the Stonestrom reference was filed almost *16 years* prior to the earliest filing of the other references yet the Examiner asserts that one of ordinary skill in the art would be tempted to combine such uncontemporaneous sources for their respective teachings in a rapidly evolving art. As one might expect, the Examiner cites to the Stonestrom reference solely to provide a rotation speed which is longer than contemporary rotation speeds, but which was typical at the time Stonestrom was filed. Stonestrom, col. 2, lines 38-43 (stating: "it has been usual practice to effect the

aforementioned relative rotation of the source detector array with respect to the patient over a time period of approximately 1 to 15 seconds (with 3 seconds being typical)).

Furthermore, though the Examiner relies upon Stonestrom for the disclosure of a rotational speed of ten second or greater, there is no evidence that such a rotational speed is desirable in conjunction with the Stergiopoulos or Cabral references. Indeed, as noted above, the Stergiopoulos reference discloses a favorable embodiment in which the rotational speed is *3/4 of a second per rotation* and the Cabral reference is silent with regard to rotational speeds. Stergiopoulos, col. 18, lines 5-7. Therefore, it is clear that the Examiner is relying on a source which is not contemporaneous with the others solely to provide a rotational speed which may have been typical in the past but which has been drastically improved in the intervening years to allow *faster* rotation.

Despite these inconsistencies between references, the Examiner supports the cited combination by asserting a motivation to “reduce mechanical constraint of fast gantry rotation.” Office Action, page 7. The Examiner does not indicate where such a motivation is taught in *any* of the cited references nor can the Applicants find such a motivation in those references. Indeed, the Examiner appears to have found the asserted motivation not in the art, *but in the application itself*. Application, page 3, line 24 to page 4, line 4.

Therefore it is clear that the Examiner has impermissibly relied upon the hindsight gained from the application itself to provide a motivation to combine the cited references. Furthermore, the Examiner’s reliance upon the Stonestrom reference solely to provide a rotational speed which is obsolete in current systems for the sole and unsupported purpose of denigrating the present claims is indicative of the Examiner’s impermissible reliance on hindsight in evaluating the claims. Such hindsight analysis is driven by the desired result, here the denigration and rejection of the present claims, and *not* by the teachings of the references. Withdrawal of the rejections based upon the impermissible

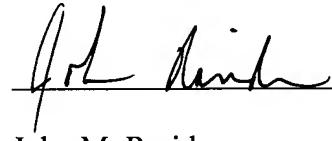
combination of the Stergiopoulos, Cabral, and Stonestrom references is, therefore, respectfully requested.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: September 7, 2005


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